

What is claimed is:

1. A mobile communication control method in which a mobile station sets a link with one or more base stations, comprising the steps of:

5 measuring a received signal quality of a pilot signal transmitted from each of said base stations;

determining one or more transmitting base stations from among the base stations with which the mobile station has set the link (hereafter referred to as active set base station) in  
10 accordance with the measured results; and

notifying the determined result to said active set base stations,

wherein all of the active set base stations are enabled for transmission depending on a state of the transmission power  
15 value from said transmitting base stations.

2. The mobile communication control method according to claim 1, further comprising the steps of:

transmitting a dedicated control signal to said mobile station in said active set base station;

20 transmitting a dedicated data signal in addition to said dedicated control signal to said mobile station in said transmitting base station; and

estimating a transmission power value of the dedicated control signal transmitted by said active set base station, and  
25 making all of the active set base stations the transmitting base station, if an estimated value of the transmission power value

of the dedicated control signal transmitted by the active set base station other than said transmitting base stations is greater than or equal to a predetermined threshold value for the estimated value of transmission power value of the dedicated control signal  
5 transmitted by said transmitting base station in said mobile station.

3. The mobile communication control method according to claim 1, further comprising the steps of:

transmitting a dedicated data signal to said mobile station  
10 in said transmitting base station; and  
estimating a transmission power value of the dedicated data signal transmitted by said transmitting base station, and making all of the active set base stations the transmitting base station if a difference between an estimated value of the transmission  
15 power value of said transmitting base station and the predetermined maximum transmission power value of base station is smaller than or equal to a predetermined threshold value in said mobile station.

4. The mobile communication control method according to claim  
20 2, further comprising a step of measuring the received powers of a common pilot signal that said active set base station transmits at a predetermined power value and said dedicated control signal or said dedicated data signal transmitted at a power value under the transmission power control in said mobile  
25 station, and estimating a power value of said dedicated control signal or said dedicated data signal from a difference between

the received power of said common pilot signal and the received power of said dedicated control signal or said dedicated data signal.

5. The mobile communication method according to claim 1,  
5 further comprising a step of measuring the received signal quality of the dedicated data signal transmitted from said transmitting base station in said mobile station, and making all of the active set base stations the transmitting base station, in the case  
10 where the received signal quality is less than a predetermined signal quality even if said transmitting base station makes the transmission at the predetermined maximum transmission power value.

6. A mobile communication system in which a mobile station sets a link with one or more base stations, measures a received  
15 signal quality of a pilot signal transmitted from each of said base stations, determines one or more transmitting base stations from among the base stations with which the mobile station has set the link (hereafter referred to as active set base station) in accordance with the measured results, and notifies the  
20 determined result to said active set base stations,

wherein all of the active set base stations are enabled for transmission depending on a state of the transmission power value from said transmitting base stations.

7. The mobile communication system according to claim 6,

wherein said active set base station transmits a dedicated control signal to said mobile station, said transmitting base station transmits a dedicated data signal in addition to the dedicated control signal, and said mobile station estimates a transmission power value of the dedicated control signal  
5 transmitted by said active set base station, wherein all of the active set base stations are enabled for transmission, if an estimated value of the transmission power value of the dedicated control signal transmitted by the active set base station other  
10 than said transmitting base stations is greater than or equal to a predetermined threshold value for the estimated value of transmission power value of the dedicated control signal transmitted by said transmitting base station.

8. The mobile communication system according to claim 6,  
15 wherein said transmitting base station transmits a dedicated data signal to said mobile station, and said mobile station estimates a transmission power value of the dedicated data signal transmitted by said transmitting base station, and  
all of the active set base stations are enabled for  
20 transmission, if a difference between an estimated value of the transmission power value of said transmitting base station and the predetermined maximum transmission power value of base station is smaller than or equal to a predetermined threshold value.

25 9. The mobile communication system according to claim 7,

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wherein said mobile station measures the received powers of a common pilot signal that said active set base station transmits at a predetermined power value and said dedicated control signal or said dedicated data signal transmitted at a power value under the transmission power control, and estimates a power value of said dedicated control signal or said dedicated data signal from a difference between the received power of said common pilot signal and the received power of said dedicated control signal or said dedicated data signal.

10 10. The mobile communication system according to claim 6,  
wherein said mobile station measures the received signal quality of a signal transmitted from said transmitting base station, and

all of the active set base stations are enabled for  
15 transmission, in the case where the received signal quality is less than a predetermined signal quality even if said transmitting base station makes the transmission at the predetermined maximum transmission power value.

11. A mobile station which sets a link with one or more base  
20 stations, comprising means for measuring the received signal quality of a pilot signal transmitted from said base stations; means for determining one or more transmitting base stations from among the base stations with which the mobile station has set the link (hereafter referred to as active set base station)  
25 in accordance with the measured results; and means for notifying the determined result to said active set base stations,

wherein it is controlled that all of the active set base stations are enabled for transmission depending on a state of the transmission power value of said one or more transmitting base stations.

5 12. The mobile station according to claim 11,

wherein said mobile station estimates a transmission power value of the dedicated control signal transmitted by said active set base station, and notifies that all of the active set base stations are enabled for transmission in the case where an  
10 estimated value of the transmission power value of said dedicated control signal transmitted by the active set base station other than said transmitting base stations is greater than or equal to a predetermined threshold value for the estimated value of transmission power value of the dedicated control signal  
15 transmitted by said one or more transmitting base stations.

13. The mobile station according to claim 11,

wherein said mobile stations estimates a transmission power value of the dedicated data signal transmitted by said transmitting base stations, and notifies that all of the active  
20 set base stations are enabled for transmission in the case where a difference between an estimated value of the transmission power value of said transmitting base station and the predetermined maximum transmission power value of base station is smaller than or equal to a predetermined threshold value.

25 14. The mobile station according to claim 12,

wherein said mobile station measures the received powers of a common pilot signal that said active set base station transmits at a predetermined power value and said dedicated control signal or said dedicated data signal transmitted at a power value under the transmission power control, and estimates a power value of said dedicated control signal or said dedicated data signal from a difference between the received power of said pilot signal and the received power of said dedicated control signal or said dedicated data signal.

10 15. The mobile station according to claim 11,

wherein said mobile station measures the received signal quality of a signal transmitted from said transmitting base station, and notifies that all of the active set base stations are enabled for transmission in the case where the received signal quality is less than a predetermined signal quality even if said transmitting base station makes the transmission at the predetermined maximum transmission power value.